

1. Identification

Product identifier SYLVAPINE™ DPHO

Other means of identification

SDS number 9056

Product Code 200000000677

Recommended use Industrial uses: Uses of substances as such or in preparations at industrial sites. Formulation [mixing] of preparations and/or re-packaging (excluding alloys).

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

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Country USA

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2. Hazard(s) identification

Physical hazards Flammable liquids Category 3

Health hazards Skin corrosion/irritation Category 2

Sensitization, skin Category 1

Aspiration hazard Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Keep container tightly closed. Avoid breathing mist or vapor. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace.

Response	Specific treatment (see this label). If swallowed: Immediately call a poison center/doctor. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Do NOT induce vomiting. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	May cause flash fire or explosion. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Dipentene		Proprietary	100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Rash. Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Water spray, dry chemical, carbon dioxide. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Wear suitable protective equipment. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Keep containers closed when not in use. Store in a well-ventilated place. Store at ambient temperature and atmospheric pressure. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA Components

U.S. - OSHA Components	Type	Value	Form
Dipentene	PEL	560 mg/m ³ 100 ppm	Turpentine, oil Turpentine, oil

ACGIH Components	Type	Value	Form
Dipentene	TWA	20 ppm	Turpentine, oil
U.S. - NIOSH Components	Type	Value	Form
Dipentene	TWA	560 mg/m3 100 ppm	Turpentine, oil Turpentine, oil
U.S. - WEEL Components	Type	Value	Form
Dipentene	TWA	165.5 mg/m3 30 ppm	D-LIMONENE D-LIMONENE

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.



General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Eye wash fountain and emergency showers are recommended.

9. Physical and chemical properties

Appearance Liquid.

Physical state Liquid.

Form Liquid.

Color Colorless

Odor Turpentine.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 314.6 °F (157 °C)

Flash point 120.2 °F (49.0 °C) Tagliabue

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 0.7 %

Flammability limit - upper (%)	6.1 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	4.7 (air=1)
Relative density	0.87 ASTM D802-82 at 15°C/15°C
Solubility(ies)	
Solubility (water)	< 0.1 % at 25°C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	458.6 °F (237 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	870.00 kg/m3 at 15°C
Percent volatile	100 % by volume estimated
Weighted solids	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Strong oxidizing agents. Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Dipentene	Irritation Corrosion - Eye, Not irritating.; OECD 405; Result: Negative Species: New Zealand white rabbit Organ: Eye
Ingestion	May be fatal if swallowed and enters airways. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. Rash. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. May cause an allergic skin reaction.

Components	Species	Test Results
Dipentene		
Acute		
Dermal		
LD50	New Zealand white rabbit	5000 mg/kg, 14 days OECD 402;
Oral		
LD50	Sprague-Dawley rat	> 2000 mg/kg, 14 days OECD 423;

Components	Species	Test Results
Subchronic Oral NOAEL	Mouse	500 mg/kg/day, 90 days Data is for similar product.; OECD 408;
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Causes skin irritation.	
Corrosivity Dipentene		Irritation Corrosion - Skin, This substance may cause moderate skin irritation.; Data is for similar product.; OECD 404; Result: Positive Species: New Zealand white rabbit Organ: Skin
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Eye Contact Dipentene		Irritation Corrosion - Eye, Not irritating.; OECD 405; Result: Negative Species: New Zealand white rabbit Organ: Eye
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	May cause an allergic skin reaction.	
Skin sensitization Dipentene		22 % v/v Local Lymph Node Assay - Lowest Concentration Producing Reaction, May cause sensitization by skin contact.; Data is for similar product.; OECD 429; Result: Positive Species: Mouse Organ: Skin
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Mutagenicity Dipentene		Germ Cell Mutagenicity: Ames, Not mutagenic.; Data is for similar product.; OECD 471; Result: Negative Species: Bacteria (<i>Pseudomonas putida</i>) Germ Cell Mutagenicity: Ames, Not mutagenic.; OECD 471; Result: Negative Species: <i>Salmonella typhimurium</i>
Carcinogenicity Dipentene	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. 250 - 500 mg/kg/day Carcinogenicity, This substance has no evidence of carcinogenic properties.; Data is for similar product.; OECD 451; Result: Negative Species: Mouse Organ: Gavage (Oral) Test Duration: 103 weeks 75 - 150 mg/kg/day Carcinogenicity, This substance has no evidence of carcinogenic properties.; Data is for similar product.; OECD 451; Result: Negative Species: Rat Organ: Gavage (Oral) Test Duration: 103 weeks	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not regulated.		

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Dipentene			
	EC10	Activated sewage sludge	18 mg/l, 3 hr OECD 209;
	EC50	Activated sewage sludge	209 mg/l, 3 hr OECD 209;
		Algae (Pseudokirchneriella subcapitata)	8 mg/l, 72 hr Data is for similar product.; OECD 201;
Aquatic			
Algae	NOEC	Algae	2.62 mg/l, 72 hr Data is for similar product.; OECD 201;
Crustacea	NOEC	Daphnia magna	0.27 mg/l, 21 d Data is for similar product.; OECD 211;
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	0.36 mg/l, 48 hr Data is for similar product.; OECD 202;
Fish	LC50	Fathead minnow (Pimephales promelas)	0.72 mg/l, 96 hr Data is for similar product.; OECD 203;

* Estimates for product may be based on additional component data not shown.

Persistence and degradability The product is biodegradable.

Photolysis

Half-life (Photolysis-atmospheric)

Dipentene 0.365 h AOPWIN v 1.92, Not classified

Biodegradability

Percent degradation (Aerobic biodegradation)

Dipentene 80 % OECD 301D, Readily biodegradable
Species: Activated sewage sludge
Test Duration: 28 days

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Dipentene 4.59, at 25°C

Mobility in soil No data available.

Adsorption

Soil/sediment sorption - log Koc

Dipentene 3018 QSAR, at 20°C

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information**DOT**

UN number	UN2052
UN proper shipping name	Dipentene, MARINE POLLUTANT, MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B1, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242

IATA

UN number	UN2052
UN proper shipping name	Dipentene, MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	yes
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN2052
UN proper shipping name	Dipentene, MARINE POLLUTANT, MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

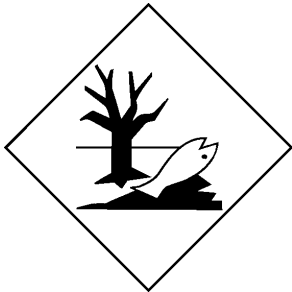
DOT



IATA; IMDG



Marine pollutant



General information

DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

NFPA ratings



16. Other information, including date of preparation or last revision

Issue date 02-10-2015

Revision date 12-14-2016

Version # 3.0

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Revision information